

Docket No. 201009-007000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: ) Art Unit: 2812  
Stephen J. FONASH, *et al.* ) Confirmation No.: 7746  
Application No.: 09/836,449 ) Examiner: Richard A. Booth  
Filed: April 17, 2001 ) Date: December 19, 2005  
For: DEPOSITED THIN FILMS AND THEIR USE  
IN SEPARATION AND SACRIFICIAL LAYER  
APPLICATIONS

**CROSS REFERENCE TO RELATED APPLICATION(S)**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to Applicants duty of candor, Applicants wish to inform the Examiner of the following application(s) directed to related technical subject matter:

**Serial No.: 10/317,153**

**Attorney Docket No.: 201009-001000**

**Filing Date: December 12, 2002**

**Title: Chemical Reactor Templates: Sacrificial Layer Fabrication and Template Use**

**Serial No.: 10/340,723**

**Attorney Docket No.: 201009-002000**

**Filing Date: January 13, 2003**

**Title: Use Of Sacrificial Layers In The Manufacture Of High Performance Systems On Tailored Substrates**

**Serial No.: 11/008,989**


**Attorney Docket No.: 201009-008000**

**Filing Date: December 13, 2004**

**Title: Controlled Nanowire Growth In Permanent Integrated Nano-Templates And Method Of Fabricating Sensor And Transducer Structures**

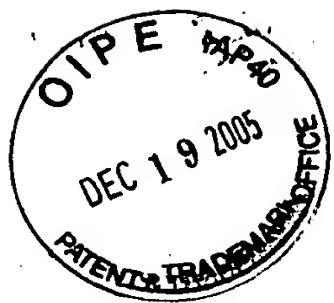
The above applications are commonly assigned and directed to related technical subject matter. The Commissioner is hereby authorized to charge the required fee of \$180.00 to comply with the provisions of 37 C.F.R. § 1.97(c), or credit any overpayment to Deposit Account No. 19-2380 (201009-007000).

Respectfully submitted,



Scott J. Hawranek  
Reg. No. 52,411

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In re Patent Application of:	)	Art Unit: 2812
Stephen J. FONASH, <i>et al.</i>	)	Confirmation No.: 7746
Application No.: 09/836,449	)	Examiner: Richard A. Booth
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For: DEPOSITED THIN FILMS AND THEIR USE IN SEPARATION AND SACRIFICIAL LAYER APPLICATIONS		

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

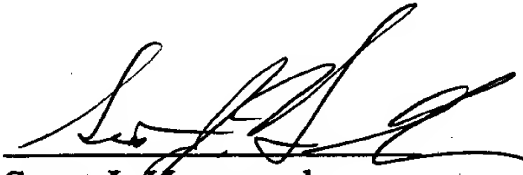
In accordance with the duty of disclosure as set forth in 37 C.F.R. § 1.56, the accompanying information is being submitted in accordance with 37 C.F.R. §§ 1.97 and 1.98.

Pursuant to 37 C.F.R. § 1.98, a copy of each of the documents cited is enclosed. However, copies of the listed U.S. patents and U.S. patent application publications are not enclosed since it is no longer required according to the July 11, 2003, waiver of the requirement for copies of cited U.S. patents and U.S. patent application publications in national patent applications filed after June 30, 2003 and international applications entering the national stage under 35 U.S.C. § 371 after June 30, 2003.

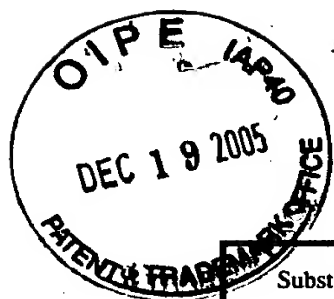
It is requested that the accompanying PTO-1449 be considered and made of record in the above-identified application. To assist the Examiner, the documents are listed on the attached form PTO-1449. It is respectfully requested that an Examiner initialed copy of this form be returned to the undersigned. Also, attached is a cross reference to related application(s) to be reviewed by the Examiner.

The Commissioner is hereby authorized to charge the required fee of \$180.00 to comply with the provisions of 37 C.F.R. § 1.97(c), or credit any overpayment to Deposit Account No. 19-2380 (201009-007000).

Respectfully submitted,

  
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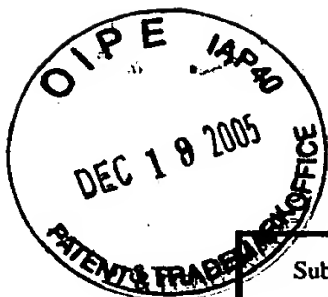
Substitute for form 1449A/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	09/836,449
Sheet 1 of 4				Filing Date	April 17, 2001
				First Named Inventor	Stephen J. FONASH
				Art Unit	2812
				Examiner Name	Richard A. BOOTH
				Attorney Docket Number	201009-007000

U.S. PATENT DOCUMENTS					
Examiner Initials <sup>*</sup>	Cite No. <sup>1</sup>	U.S. Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
		US-6,486,041	11/26/02	Henley, et al.	
		US-6,399,177	06/04/02	Fonash, et al.	
		US-6,372,608	04/16/02	Shimoda, et al.	
		US-6,225,192	05/01/01	Aspar, et al.	
		US-6,214,701	04/10/2000	Matsushita, et al.	
		US-6,158,824	12/12/00	Yonemura, et al.	
		US-5,854,123	12/29/98	Sato, et al.	
		US-5,641,709	06/24/97	Lee	
		US-5,690,753	11/25/97	Kawauchi, et al.	
		US-5,690,763	11/25/97	Ashmead, et al.	
		US-5,811,348	09/22/98	Matsushita, et al.	
		US-5,866,204	02/02/99	Robbie, et al.	
		US-6,555,443	04/29/03	Artmann, et al.	
		US-5,242,863	09/07/93	Xiang-Zheng, et al.	
		US-6,774,010	08/10/04	Chu, et al.	
		US-5,594,171	01/14/97	Ishida, et al.	
		US-5,811,348	09/22/98	Matsuchita, et al.	
		US-5,854,123	12/29/98	Sato, et al.	
		US-5,866,204	02/02/99	Robbie, et al.	
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		US-6,372,608	04/16/02	Shimoda, et al.	
		US-6,486,041 B2	11/26/02	Henley, et al.	
		US-6,399,177	06/04/02	Fonash, et al.	
		US-6,449,079 B1	09/10/02	Hermann	
		US-6,555,443	04/29/03	Artman, et al.	
		US-6,774,010	08/10/04	Chu, et al.	
		US-5,854,123	12/29/98	Sato, et al.	
		US-6,905,655	06/14/05	Sato, et al.	
		US-2002/0068419	06/06/02	Sakaguchi, et al.	
		US-2002/0197836	12/26/02	Lyer, et al.	
		US-2002/0020053	2/21/2002	Fonash, et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials <sup>*</sup>	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
		DE 198 41 430	05/25/00			
		EP 0 993 029	04/12/00			

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.



<b>Substitute for form 1449A/PTO</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>				<b>Complete if Known</b>			
				Application Number		09/836,449	
				Filing Date		April 17, 2001	
				First Named Inventor		Stephen J. FONASH	
				Art Unit		2812	
				Examiner Name		Richard A. BOOTH	
Sheet	2	of	4	Attorney Docket Number		201009-007000	

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		Country Code <sup>3</sup> Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
		EP 895 276 A1		02/99			
		EP 0 297 258		04/08/92			
		WO 00/74932 A1		12-14-00			
		WO 01/80286 A2		10-25-01			√
		WO 03/050854 A2		06/19/03			
		WO 99/27325 A2		06/99			

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		LEE, et al., A novel fabrication technology for Si TFTs on flexible substrates, ECS Extended Abstract No. 791, Electrochemical Society meeting, October 2000.	
		WAGNER, et al., Flexible display enabling technology, Cockpit Displays VIII: Displays for Defense Applications, Proc. SPIE Vol. 4362, p. 226-244, September, 2001.	
		STURM, et al., Enabling Technologies for Plastic Displays, Cockpit Displays IX: Displays for Defense Applications, Proc. SPIE Vol. 4712, p. 222-236, August 2002.	
		LI, et al., Transfer approach toward fabricating poly-Si TFTs on plastic substrates ECS Extended Abstracts No. 647, Electrochemical Society meeting, Oct., 2002.	
		LEE, et al., High Performance Poly-Si TFTs on Plastic Substrates Using a Nano-Structured Separation Layer Approach, IEEE Electron Device Letters, Vol. 24, No. 1, January 2003.	
		KALKAN, et al., Nanocrystalline Si Thin Films With Arrayed Void-Column Network Deposited By High Density Plasma, Journal Of Applied Physics, Vol. 88, No. 1, July 1, 2000, PP. 555-561.	
		TAYANAKA, et al., Thin-Film Crystalline Silicon Solar Cells Obtained By Separation Of A Porous Silicon Sacrificial Layer", Crystalline Silicon Solar Cells And Technologies, Vol. 2, July 6, 1998, PP. 1272-1277.	
		CHOU, et al., Nanoimprint lithography, J. Vac. Sci., Tech. B, 1996, 14(6), 4129-4133.	

Examiner Signature		Date Considered	
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Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

**Complete if Known**

Application Number	09/836,449
Filing Date	April 17, 2001
First Named Inventor	Stephen J. FONASH
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Examiner Name	Richard A. BOOTH
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Sheet	3	of	4
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							√

**OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

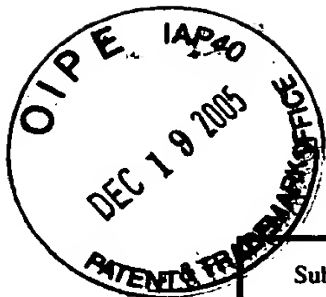
Examiner Initials <sup>*</sup>	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		COLBURN, et al., Step and Flash Imprint Lithograph, Solid State Technology, July 2001.	
		RESNICK, et al., High Resolution Templates for Steps and Flash Imprint Lithograph, J. Microlith., Microfab., Microsyst., Vol. 1 No. 3, October 2002.	
		BENDER, et al., Multiple Imprinting in UV based Nanoimprint Lithography: Related Materials Issues, Microelectronic Engineering, 61-62 (2002), pp. 407-413.	
		TANIGUCHI, et al., Measurement of Adhesive Force Between Mold and Photocurable Resin in Imprint Technology, Jpn. J. Appl. Phy. Vol. 41, 2002, 4194-4197.	
		MARSEN, et al., Fullerene-Structured Nanowires of Silicon, Physical Review B, Vol. 60, Number 16, October 15, 1999, 593-600, The American Physical Society.	
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		EDITED BY - H. BALTES, W. GÖPEL, J. HESSE, Sensors Update, Volume 4, Wiley-Vch Verlag GmbH, D-69469 Weinheim, Federal Republic of Germany, 1998, 1-220.	
		E.I. GIVARGIZOV, Fundamental Aspects of VLS Growth, Journal of Crystal Growth, 31, 1975, 20-30, North-Holland Publishing Company.	
		BJERNELD, et al., Laser-Induced Growth and Deposition of Noble-Metal Nanoparticles for Surface-Enhanced Raman Scattering, Nano Letters, 2003 Vol. 3., No. 5, 593-596, American Chemical Society.	

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Substitute for form 1449A/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(use as many sheets as necessary)</i>				Application Number	09/836,449
				Filing Date	April 17, 2001
				First Named Inventor	Stephen J. FONASH
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Sheet	4	of	4	Attorney Docket Number	201009-007000

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		H. G. CRAIGHEAD, Issues In Nanotechnology Review - Nanoelectromechanical Systems, Science Mag. November 24, 2000, Vol. 290, 532-1535.	
		FRITZ, et al., Translating Biomolecular Recognition into Nanomechanics, Science Magazine, April 14, 2000, Vol. 288, 316-318.	
		WAGNER, et al., Vapor-Liquid-Solid Mechanism Of Single Crystal Growth, Applied Physics Letters, Vol. 4, Number 5, March 1, 1964, 89-90.	
		MICHAEL ROUKES, Nanoelectromechanical System Face The Future, Physicsweb, Feature: February 2001, 1-6, <a href="http://physicsweb.org/articles/world/14/2/8/2">http://physicsweb.org/articles/world/14/2/8/2</a> .	
		CHENG, et al., Role of Electric Field on Formation of Silicon Nanowires, Journal of Applied Physics, Vol. 94, Number 2, July 15, 2003, 1190-1194 American Institute of Physics.	

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